

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CARL F. KERNIZAN and JAMES R. SPENCE

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Appeal No. 2001-0214  
Application No. 08/826,283

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ON BRIEF

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Before PAK, JEFFREY T. SMITH, and POTEATE, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 6, 8, 9, 11, 12, 19 and 20, which are all of the claims pending in the above-identified application.

*APPEALED SUBJECT MATTER*

Claims 1, 9, and 12 are representative of the subject matter on appeal and read as follows:

1. A composition for lubricating contacting surfaces on components in relative motion to each other comprising:

a) a lubricant, and

b) a colloidal suspension having elemental nano-phase metallic core particles selected from the group consisting essentially of bismuth, tin, zinc, copper, and silver and a surfacant adhering to and surrounding the metal core, the lubricant composition being characterized in that it coats the said contacting surfaces to which it is applied and fill in surface asperities in those surfaces to extend the life of the contact surfaces.

9. A metallic nano-phase colloidal suspension for lubricating contacting surfaces on components in relative motion to each other comprising

a) an elemental metal core selected from [sic, from] the group consisting essentially of bismuth, tin, zinc, copper, and silver, and

b) a surfacant, the colloidal suspension having a metal content by weight of about 6-30% and a surfacant by weight of about 70-94% and being characterized in that it coats the said contacting surfaces to which it is applied and fills in surface asperities in those surfaces to extend the life of the contacting surfaces.

12. A rolling element bearing lubricant composition comprising

a) a lubricant selected from the group consisting essentially of oils, greases and polyalphaolefins,

b) elemental nano-phase metallic particles selected from the group consisting essentially of bismuth, tin, zinc, copper, and silver,

c) a surfacant, and

d) wherein the rolling element bearing has contacting surfaces between its rolling elements and raceways, and the lubricant composition is characterized in that during rotation of the bearing the elemental metallic particles bond to the contacting surfaces of the bearing to which it is applied thereby forming a lubricant layer and filling in surface asperities in the contacting surfaces.

#### *PRIOR ART REFERENCES*

The prior art references relied upon by the examiner are:

Verdone et al. (Verdone)	3,814,696	Jun. 4, 1974
Rosensweig	3,917,538	Nov. 4, 1975
Moskowitz et al. (Moskowitz)	3,977,739	Aug. 31, 1976
Chagnon	4,356,098	Oct. 26, 1982
Solc nee Hajna (Hajna)	4,421,660	Dec. 20, 1983
Borduz et al. (Borduz)	4,604,222	Aug. 5, 1986

#### *THE REJECTION*

Claims 1 through 6, 8, 9, 11, 12, 19 and 20 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Chagnon, Verdone, Rosensweig, Borduz, Hajna and Moskowitz.<sup>1</sup>

#### *OPINION*

We have carefully reviewed the claims, specification, and applied prior art, including all of the arguments advanced by both the examiner and appellants in support of their respective

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<sup>1</sup> The examiner has withdrawn "[t]he 35 U.S.C. [§] 112[,], second paragraph[,], rejection" set forth in the final Office action dated July 27, 1998. See the Answer, page 5.

positions. This review leads us to conclude that the examiner's Section 103 rejection is not well founded. Accordingly, we reverse the examiner's Section 103 rejection for essentially the reasons set forth by the appellants in their Brief and Reply Brief. We add the following primarily for emphasis.

"When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references [citations omitted]." *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). When determining the patentability of a claimed invention which combines several elements, "the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination [citations omitted]." *Rouffet*, 149 F.3d at 1356, 47 USPQ2d at 1456.

Here, the examiner takes the position that (Answer, pages 7 and 8):

Having the prior art before him, it would have been obvious to the artisan in the art to employ Verdone et al[.]'s process to produce silver as an elemental metal in Chagnon['s] lubricant composition and colloidal suspension and to select other metal elements such as tin, zinc and copper because nee Hajna suggests that the metals are functional[ly] equivalent in a colloidal suspension to the metals of Rosensweig and Borduz et al[.] used in their colloidal suspension providing the motivation to select such

metal elements for use in Chagnon['s] lubricant composition and colloidal with the same attendant functional use. Moskowitz provides the motivation to use Chagnon['s] modified lubricant composition and colloidal suspension in rolling elements to fill the surface asperities and extend the life of the bearings.

This position, however, is flawed as it does not provide sufficient factual bases for combining the teachings of the applied prior art references to arrive at the claimed composition. *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968), *reh'g denied*, 390 U.S. 1000 (1968) (the examiner has the initial burden of presenting a sufficient factual basis to support the obviousness of making the claimed combination). Specifically, the examiner has not demonstrated that Verdone teaches that its process for producing a silver colloidal suspension is useful for forming the ferrofluid of the type described in Chagnon. Nor has the examiner demonstrated that the silver colloidal suspension taught in Verdone is useful for the purpose or utility described in Chagnon. Even if the remaining prior art references teach that "metals are functional[ly] equivalent in a colloidal suspension" as alleged by the examiner, that fact alone does not indicate that there is requisite suggestion or motivation to select the claimed metals and attach

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a surfactant thereto, with a reasonable expectation of successfully obtaining the purpose or utility described in Chagnon.

Accordingly, on this record, we are constrained to reverse the examiner's rejection of claims 1 through 6, 8, 9, 11, 12, 19 and 20 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Chagnon, Verdone, Rosensweig, Borduz, Hajna and Moskowitz.

#### *OTHER ISSUES*

We observe that Verdone teaches stable colloidal metals in a non-aqueous medium, which are reduced in the same manner as that disclosed in the appellants' application in the presence of a fatty acid having 10 to 22 carbon atoms or a salt thereof. Compare Verdone, column 1, lines 62 to column 2, line 50 with the specification, page 3. The colloidal metals exemplified in Verdone include silver and tin. See columns 3 and 4, Examples 1 through 5. According to column 4, lines 2-3, of Hajna, the salts of fatty acids taught in Verdone are known surfactants (surface active agents).

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Thus, upon return of this application, the examiner is to determine whether the above teachings of Verdone, as explained by Hajna, affect the patentability of the subject matter defined by claims 9, 11, and 20 under 35 U.S.C. §§ 102 or 103.

*CONCLUSION*

In view of the foregoing, we reverse the examiner's decision rejecting all of the appealed claims under 35 U.S.C. § 103 and remand the application to the examiner to take appropriate action consistent with the above instruction.

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This application, by virtue of its "special" status, requires immediate action. See *Manual of Patent Examining Procedure* (MPEP) § 708.01 (8<sup>th</sup> Ed., Aug. 2001). It is important that the Board be informed promptly of any action affecting the appeal in this application.

*REVERSED and REMANDED*

CHUNG K. PAK	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JEFFREY T. SMITH	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
LINDA R. POTEATE	)	
Administrative Patent Judge	)	

CKP/hh



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